CLAIMS

What is claimed is:

1.   A method comprising:

programming an aggregation table defining a plurality of entries, each entry

associated with a column and a row, wherein programming the aggregation table includes

(a) setting an entry to true if

the column of the entry corresponds to a physical link of a link

aggregation group (LAG) that uses an aggregation method associated with the row of the

entry and which is the physical link to be selected within its LAG according to the

aggregation method, or

the column of the entry corresponds to a physical link associated

with a LAG that does not use the aggregation method associated with the row of the

entry; and

(b) setting all remaining entries to false.

2.   The method of claim 1 further comprising

receiving a frame at a switch engine that supports a set of aggregation methods;

and

calculating a set of aggregation codes for the frame.

3.   The method of claim 2 further comprising selecting a set of two or more rows of

the aggregation table, each row being selected according to a corresponding aggregation

method, and wherein the set of two or more rows reflects the set of aggregation methods supported by the switch engine.

4.   The method of claim 3 further comprising calculating an aggregation mask by performing a Boolean AND operation on the table entries of the two or more selected rows.

5.   The method of claim 4 further comprising calculating an output mask by performing a Boolean AND operation on the aggregation mask and a forwarding mask.

6.   The method of claim 5 further comprising forwarding the frame to at least one physical link according to the output mask.

7.   The method of claim 1 wherein the aggregation table includes at least two sets of rows and at least two sets of columns, each set of rows corresponds to a set of aggregation codes derived exclusively from one of at least two aggregation methods, such that each aggregation method is associated with only one set of rows, each set of columns corresponds to a link aggregation group (LAG), each LAG includes a plurality of physical links, each physical link corresponds to one column, and each LAG uses only one aggregation method.

8.   An apparatus comprising:

means for programming an aggregation table defining a plurality of entries, each entry associated with a column and a row, wherein the means for programming the aggregation table includes

(a) means for setting an entry to true if:

the column of the entry corresponds to a physical link of a link aggregation group (LAG) that uses an aggregation method associated with the row of the entry and which is the physical link to be selected within its LAG according to the aggregation method, or

the column of the entry corresponds to a physical link associated with a LAG that does not use the aggregation method associated with the row of the entry; and

(b) means for setting all remaining entries to false.

9.   The apparatus of claim 8 further comprising

means for receiving a frame at a switch engine that supports a set of aggregation methods; and

means for calculating a set of aggregation codes for the frame.

10.   The apparatus of claim 9 further comprising means for selecting a set of two or more rows of the aggregation table, each row being selected according to a corresponding aggregation method, and wherein the set of two or more rows reflects the set of aggregation methods supported by the switch engine.

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11. The apparatus of claim 10 further comprising means for calculating an aggregation mask, the means for calculating an aggregation mask including means for performing a Boolean AND operation on the table entries of the two or more selected rows.

12. The apparatus of claim 11 further comprising means for calculating an output mask, the means for calculating an output mask including means for performing a Boolean AND operation on the aggregation mask and a forwarding mask.

13. The apparatus of claim 12 further comprising means for forwarding the frame to at least one physical link according to the output mask.

14. The apparatus of claim 8 wherein the aggregation table includes at least two sets of rows and at least two sets of columns, each set of rows corresponds to a set of aggregation codes derived exclusively from one of at least two aggregation methods, such that each aggregation method is associated with only one set of rows, each set of columns corresponds to a link aggregation group (LAG), each LAG includes a plurality of physical links, each physical link corresponds to one column, and each LAG uses only one aggregation method.

15.   An apparatus comprising a machine accessible medium containing instructions which, when executed by a machine, cause the machine to perform operations comprising:

programming an aggregation table defining a plurality of entries, each entry associated with a column and a row, wherein programming the aggregation table includes

(a) setting an entry to true if

the column of the entry corresponds to a physical link of a link aggregation group (LAG) that uses an aggregation method associated with the row of the entry and which is the physical link to be selected within its LAG according to the aggregation method, or

the column of the entry corresponds to a physical link associated with a LAG that does not use the aggregation method associated with the row of the entry; and

(b) setting all remaining entries to false.

16.   The apparatus of claim 15 further comprising

receiving a frame at a switch engine that supports a set of aggregation methods; and

calculating a set of aggregation codes for the frame.

17.   The apparatus of claim 16 comprising selecting a set of two or more rows of the aggregation table, each row being selected according to a corresponding aggregation

method, and wherein the set of two or more rows reflects the set of aggregation methods supported by the switch engine.

18.   The apparatus of claim 17 further comprising calculating an aggregation mask by performing a Boolean AND operation on the table entries of the two or more selected rows.

19.   The apparatus of claim 18 further comprising calculating an output mask by performing a Boolean AND operation on the aggregation mask and a forwarding mask.

20.   The apparatus of claim 19 further comprising forwarding the frame to at least one physical link according to the output mask.

21.   The apparatus of claim 15 wherein the aggregation table includes at least two sets of rows and at least two sets of columns, each set of rows corresponds to a set of aggregation codes derived exclusively from one of at least two aggregation methods, such that each aggregation method is associated with only one set of rows, each set of columns corresponds to a link aggregation group (LAG), each LAG includes a plurality of physical links, each physical link corresponds to one column, and each LAG uses only one aggregation method.